CONVECTION ISSUES

- Pather, Bergman, Rasch, Rodriguez, others?
- Bergman, Rodriguez to reconstruct what we have]
- Meeting tomorrow morning
- GISS probably easy to modify
- CCM3 – What was done? Add shallow and deep? If so, how much of a problem?

Harder to code (downdrafts).

DECISION: WHAT TO DO WITH IPCC?

TROPOSPHERE

- Do we have all the diagnostics available that people need?
- Tendency files do not have everything to look at the budget in a region.
- Missing: 3-d advection, change in tracer mass, loss (for tracer runs)
- Meaning of vertical fluxes (Philip Cameron Smith)

TROPOSPHERE (CONT).

- Analysis of chemical budgets
- Careful analysis of NOy budget (Bob Chatfield)

- Further analysis of tracer runs to understand reasons for differences between simulations

- Who is going to do what in the near term??

- v 1.5 (all aerosol fields) will be used for first publication (all aerosol fields)
- Tracer runs will not change

TROPOSPHERE

- Model description - Jose, Bryan
- Evaluation with obs. - Logan
- NOy family - Chatfield
- H_2O/temp - Prather
- HCs - Yuhang
- Chem. budget for ozone, HOx etc - Jose, Logan

- Analysis of tracer runs to diagnose causes for differences in results - Logan, who else

TROPOSPHERE

- Simulations with new lightning param.
- New met. fields - implementation issues
  - priorities, 5 yr FVGCM, fields for TRACE-P
  - issue of resolution - 2x2.5 vs. 4x5
- New chemistry, emissions?
- Evaluation with satellite data

- Interactive aerosols

- Priorities?

COMBO

- Are we satisfied with current implementation?
- Steps towards making model faster
  - What do we gain with what.
  - Can we give some rough estimates of gains?
- When do we move to fvGCM
- Aerosols?

ISSUES FOR COMBO MODEL

How do we chose the optimal merge of forecasts?

distance from "data shock"

vs

accuracy of forecast

vs

"forecast shock"

COMBO

GEOS-4-AGCM

- 5 years (SST 1994-1998 2xENSO)
- 42 eta layers to 0.01 hPa (originally 55 layers)
- 2° latitude x 2.5 ° longitude (regridded)
- Eric Nielsen (GMAO)

1) Credible STE & Stratospheric Circulation
2) Evaluate credibility of interannual variation.
   Data Sets?
3) Evaluate tropospheric circulation.
4) GCM "baseline" simulation.

COMBO

Oslo/EC-Forecast

- T159 L40
- Not directly related to ERA-40 fields from ECMWF
- Jan-Apr 2001 + a few full years
- 37-40 vertical layers; top layer >20 hPa
- will be regridded to 2° latitude x 2.5 ° longitude
- NEED TO DISCUSS THIS
- Oslo University/UCI

1) Low model top, so fields limited for COMBO model; will need Synoz or Linoz.
2) Simulate Trace-P period.

COMBO

- STE:

  1) Mark Olsen's trajectory technique
  2) ^{7}Be
  3) T & constituent concentrations
     (e.g., HALOE, EOS MLS)
- Stratosphere: Anne D., Susan S., et al.
- Inter-Hemispheric Transport in Troposphere: 1) ^{85}Kr?; 2) CFCs/HFCs/HCFCs
- Convection: ^{222}Rn & ^{210}Pb
- Plume Transport: Trace-P Asian plumes
- Any Other Ideas

AEROSOLS

- What to do: Compare RH for CCM, GISS
- Radiative forcings
- Include fvGCM runs?
- Run aircraft and soot? UEET. – Soot for different wscavenging and sedimentation; Do also at UCI.
- parametric study for soot accumulation.
- Seasalt and dust sources based on met. fields, DMS.
- OCS to model
- AER microphysics (Also in Combo)
- Interactive aerosols – Is it simple?
- Michigan microphysics
- TOMAS (Adams)